

Impacts of the deployment of the BR 242 highway in the heat sources from satellite images of Nova Uiratã, Mato Grosso State, Brazil

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ABSTRACT – In the state of Mato Grosso, Brazil, the highway named as BR-242 plays an important role in the outflow of agricultural production in the region, tending to increase the traffic with the expected construction of eight bridges to be complete in the year of 2019. Regarding the forest fires and hot spots, there is a controversy if the increase of road access raises the frequency of man-made fires or is reduced by providing access to their suppression and control, are implications on the road effects for fire management. Therefore, the aim of this study was to identify the influence on the spatial patterns represented by the hot spots detected in the lateral bands of the BR-242 highway in an area of the road, about 156 km in the municipality of Nova Uiratã. The data detected were obtained by the Database Program of the Instituto Nacional de Pesquisas Espaciais (INPE), from the dry season from May to October between 2015 to 2018. The data was analyzed, we also partitioned the distance in three classes along the BR-242 corridor as: 0 - 5 km, 5 - 10 km and 10 - 15 km, left and right side of the highway. When analyzing the variation of the heat sources, in the class 0 - 5 km presented a variation of 42% to 77%, approximately twice as much variation when compared with other classes. The class 5 - 10 km was 11% to 44%, and in the class of 10 - 15 km, variation was 11% to 28%. Probably all of these outbreaks come from clearing agricultural practice in the highway lateral bands, in addition to cleanings, can be derived from highway traffic. In this sense, measures to protect the areas near the highways are necessary to improve the safety of the drivers, evaluating the role of human presence in suppressing forest fires in the vicinity of the highway.

Keywords: environmental impacts, infrastructure, forest fires